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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,901	11/21/2003	Roger S. Kerr	86155NAB	1629

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EXAMINER

SUNG, CHRISTINE

ART UNIT	PAPER NUMBER
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2884

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/718,901		KERR ET AL.	
	Examiner		Art Unit	
	Christine Sung		2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 is/are allowed.
- 6) ☒ Claim(s) 1-11, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. The amendment filed on January 23, 2006 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1, 3, 4-11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goto (US Patent 4,829,180 A) in view of Chan (US Patent 4,742,225 A).

Regarding claim 1, Goto discloses a scanning device for radiographic media (Figure 8) comprising:

- (a) rotatable vacuum drum (element 30C) comprising an external surface, and wherein the drum rotates about a longitudinal axis (Figure 8, rotation about the axis of the drum);
- (b) a radiographic media (element 14C) disposed on the external surface;
- (c) a moveable scan bar (Figure 6, element 18 B) adjacent the drum;

(d) at least a first scan module (Figure 8, elements 20, 18C and 34C which are inside Figure 6, element 18B) mounted on the moveable scan bar;

(e) a translation drive connected to the moveable scan bar for moving the moveable scan bar perpendicular to the longitudinal axis (see arrows in figure 8, near element 20, which show translational movement of the scanning module);

(g) a control process unit for receiving scanned signals (column 5, lines 26-31); and

(h) an output device for writing the received scanned signal onto diagnostic media (column 5, lines 26-31).

Goto does not specify an analog to digital converter in communication with the scan modules for receiving scanned signals from the scan modules, however such a AD converter is inherent to the invention as disclosed by Goto, as he discloses detecting radiographic radiation then reading out electric signals. Further, Goto discloses the limitations of the claimed invention except that he does not specify a plurality of scan modules. Chan discloses a row of scan modules (Figure 3). One of ordinary skill in the art would be motivated to use the plurality of scan modules as disclosed by Chan with the invention as disclosed by Goto in order to decrease the time to scan an image or increase the collection efficiency (column 4, lines 20-39).

Regarding claims 3 and 7, Goto discloses that the radiographic media is a phosphor sheet (column 9, line 43).

Regarding claims 5 and 6, Goto discloses a scan module (figure 6) comprising:

(a) housing (figure 6, element 18B) comprising a channel (element 18Bb); a cylindrical center chamber (element 18Ba) in communication with the channel comprising a mirrored surface (element 34B); a first opening (element 32b) communicating with the cylindrical

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chamber and a second opening (where element 18Bb and 18Ba meet) communication with the cylindrical chamber;

(b) a laser (figure 8, element 16) disposed in the housing an adapted to generate a beam of stimulating radiation through the channel and the first opening to stimulating an area of photostimulable radiographic media, and wherein the stimulated area emits light and reflected light to enter the first opening of the cylindrical chamber;

(c) a light detector disposed (element 20) in the second opening for receiving light emitted and reflected into the cylindrical chamber; and

(d) a filter (Figure 8, element 34C) disposed at the second opening of the housing for selectively passing only the emitted light from the stimulated area of the photostimulable radiographic media to the light detector.

Regarding claim 8, Goto discloses that that the laser is a laser that emits between 700-1300nm (column 5, lines 3-8).

Regarding claim 9, Goto discloses a filter (column 5, lines 19-25) and further teaches that the filter is selected to selectively pass only the emitted light, but does not specify a blue filter. However, blue filters are known in the art and one of ordinary skill in the art would be motivated to use a blue filter if that filter blocks the unwanted radiation and passes the desired radiation. Determining which filter to use is a result effective variable and is constrained to the type of radiation detected.

Regarding claim 10, Goto discloses that the housing is made of a plastic (column 5, lines 37-40).

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Regarding claim 11, Goto does not specify that the housing is made in a molded one piece construction, however it would be obvious to one having ordinary skill in the art to make the housing out of a single molded construction in order to reduce manufacturing steps.

Regarding claim 13, Goto discloses that the control process unit is a computer (Figure 1, element 24).

Regarding claim 14, Goto discloses that the output device is a display (column 5, lines 30-31).

5. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goto (US Patent 4,829,180 A) in view of Chan (US Patent 4,742,225 A) further in view of Manian (US Patent 4,725,891 A).

Regarding claim 2, Goto in view of Chan discloses the limitation set forth in claim 1, but does not specify the speed at which the drum rotates. However, conventional art, as demonstrated by Manian, teaches that the rotation occurs at about 900 rpms (column 3, lines 34-35). One of ordinary skill in the art would be motivated to use the conventional rotation speed as disclosed by Manian with the invention as disclosed by Goto in view of Chan in order to ensure that the image is properly readout at a speed which minimizes the scan time, and maximizes the integrity of the image. For example, if the drum was rotated too quickly it would lead to errors in the detected data, however, if it is rotated slowly, the data may be more accurate, but the scan would take an unreasonable amount of time.

6. Claims 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goto (US Patent 4,829,180 A) in view of Chan (US Patent 4,742,225 A) further in view of Shoenfield (US Pre Grant Publication 2002/0057339A1).

Regarding claim 4, Goto in view of Chan discloses the limitations set forth in claim 1, but does not specify that the moveable scan bar is a rectangular metal structure mounted on rods and adapted for quick translational movement along the scan bar. However, Shoenfield discloses an imaging scanning device with a raster scanner that uses a rectangular metal bar (figure 1, element 21) that is mounted on bards (element 25) and adapted for quick translational movement. One of ordinary skill in the art would be motivated to use the conventional raster scanning apparatus as disclosed by Shoenfield with the invention as disclosed by Goto and Chan in order to increase the accuracy of the position of the detector elements, thus increasing the accuracy of the collected data.

Allowable Subject Matter

7. Claim 12 is allowed.
8. The following is a statement of reasons for the indication of allowable subject matter:
9. Regarding claim 12, the allowable subject matter was disclosed in the previous office action dated December 28, 2005.

Response to Arguments

10. Applicant's arguments filed January 23, 2006 have been fully considered but they are not persuasive.
11. Applicant argues that there is no motivation within the prior art for the combination of the Goto and Chan references, and further argues that Chan does not provide any teaching to motivate the improvement over Goto. However, the examiner respectfully disagrees. Chan discloses that the reason for having a plurality of detection modules is to increase collection

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efficiency, which teaches that it is desirable to collect the radiation quickly using multiple detector modules, thus reducing scanning time. Chan also teaches reducing the signal to noise ratio, but also teaches increasing the collection efficiency of the detected radiation.

12. Further, in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in *the knowledge generally available to one of ordinary skill in the art*. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). As stated above Chan does provide sufficient motivation, but it is also known in the art and obvious that there are added benefits/tradeoffs to using more than one detector module. For instance, using more modules would reduce the scan time, as a greater area is detected over the same period, but it can increase the amount of processing in a given period required because there is greater detected data in the same amount of time.

13. Applicant further argues that combination would render the primary reference inoperable. The examiner respectfully disagrees. The combination of the references would modify the single detector as disclosed by Goto with the multiple detector module scheme as disclosed by Goto. The laser disclosed by Goto spans the entire width of the detector, thus each of the detectors would be able to receive radiation and contrary to applicant's assumption the laser would not be blocked from reaching the rest of the detectors. Further, Chan also discloses a single laser (element 16), which spans the width of the detectors.

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14. Applicant further argues that the combination does not disclose the claimed invention and argues that Chan does not need to move the detectors along the scan line. However the examiner respectfully disagrees as the Chan does teach movement of the detectors along the scan line (column 3, lines 12-19) and therefore the combination of Goto and Chan discloses all of the elements.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Sung whose telephone number is 571-272-2448. The examiner can normally be reached on Monday- Friday 7-3 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CS

Christine Sung
Examiner
Art Unit 2884


OTILIA GABOR
PRIMARY EXAMINER